

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
9 June 2005 (09.06.2005)

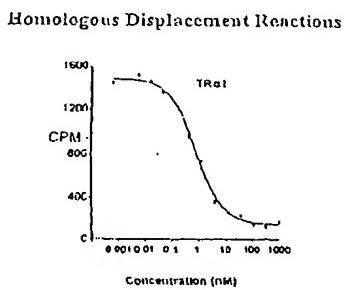
PCT

(10) International Publication Number  
**WO 2005/051298 A3**

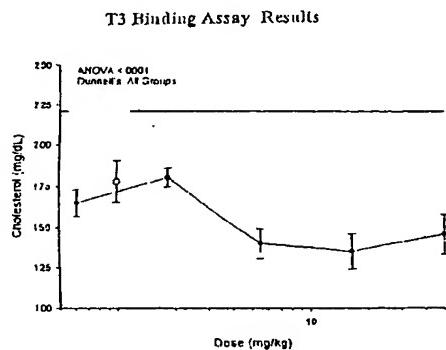
- (51) International Patent Classification<sup>7</sup>: A61K 31/28, 31/445, 31/435, C07F 9/06
- (21) International Application Number: PCT/US2004/039024
- (22) International Filing Date: 19 November 2004 (19.11.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/523,830 19 November 2003 (19.11.2003) US  
60/598,524 3 August 2004 (03.08.2004) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

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(54) Title: NOVEL PHOSPHORUS-CONTAINING THYROMIMETICS



(57) Abstract: The present invention relates to compounds of phosphonic acid containing T3 mimetics, stereoisomers, pharmaceutically acceptable salts, co-crystals, and prodrugs thereof and pharmaceutically acceptable salts and co-crystals of the prodrugs, as well as their preparation and uses for preventing and/or treating metabolic diseases such as obesity, NASH, hypercholesterolemia and hyperlipidemia, as well as associated conditions such as atherosclerosis, coronary heart disease, impaired glucose tolerance, metabolic syndromes and diabetes.



Effect of Compound 13-1-cis (●) and Compound 18 (○)  
on Cholesterol in Cholesterol Fed Rats

WO 2005/051298 A3



TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

- (88) Date of publication of the international search report:  
11 August 2005

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

compounds of formula III according to claim 14,  
pharmaceutical compositions comprising such compound of  
formula III, methods including a therapy using such  
compound of formula III

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12. claim: 73

compounds of formula X

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13. claim: 74

Method of improving liver/heart selectivity of a  
thyromimetic compound of formula Y

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14. claim: 75

Method of increasing the therapeutic index of a thyromimetic  
compound of formula Y

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15. claim: 76

Method of designing a thyromimetic compound having  
improved liver/heart selectivity.

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16. claim: 77

Method of designing a thyromimetic compound having  
improved therapeutic index

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No

PCT/US2006/020607

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/39024

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 31/28, 31/445, 31/435; C07F 9/06  
 US CL : 514/492, 514/315, 514/277; 546/22; 556/19

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

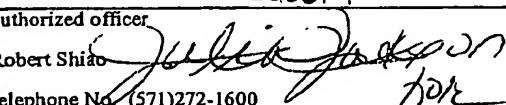
Minimum documentation searched (classification system followed by classification symbols)  
 U.S. : 514/492, 514/315, 514/277; 546/22; 556/19

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,465,687 B1 ( LI et al.) 15 October, 2002 (15.10.2002), column 23-24.	1-116
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Y		1-116
X	US 3,357,887 (KAGAN et al.) 12 December 1967 (12.12.1967), columns 1 and 10	1-116
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Y		1-116

<input type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input type="checkbox"/>	See patent family annex.
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"P"	document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search	08 June 2005 (08.06.2005)	Date of mailing of the international search report	05 JUL 2005
Name and mailing address of the ISA/US	Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571)273-8300	Authorized officer	 Robert Shiao Telephone No. (571)272-1600